United States Department of Agriculture
NRCS Natural Resources Conservation Service

# Benchmark Inventory & Records
# Producer-Certification Worksheet

## IRRIGATION

To CSP Applicant:_____(Applicant Name)

For those cropland and or pastureland acres you wish to enroll in CSP that are irrigated, please complete the following Irrigation Inventory Worksheet. This information will help us with assessing the benchmark condition for these land uses.

List irrigated tract(s) and/or field(s) no.'s _____

**1. What type of irrigation system do you use on your farm or ranch? Place an ☒ next to your selection.**

- ☐ Border – graded border
- ☐ Border – level or basin
- ☐ Border - guide
- ☐ Border - contour level field crop
- ☐ Border - contour - level rice
- ☐ Border - contour - level rice - side inlets
- ☐ Border - border ditch
- ☐ Furrow - level or Basin
- ☐ Furrow - graded furrow
- ☐ Furrow - contour furrow
- ☐ Furrow - corrugations
- ☐ Furrow - surge
- ☐ Sub-irrigation - sub-irrigated
- ☐ Flood - controlled
- ☐ Flood - uncontrolled
- ☐ Flood - contour ditch
- ☐ Sprinkler - big gun or boom
- ☐ Sprinkler - hand line or wheel line
- ☐ Sprinkler - solid set (above canopy)
- ☐ Sprinkler - solid set (below canopy)
- ☐ Center Pivot - generic
- ☐ Center Pivot - low pressure improved
- ☐ Center Pivot - low energy precision application (LEPA)*
- ☐ Center Pivot - low elevation spray application (LESA)*
- ☐ Center Pivot - low pressure in canopy (LPIC)*
- ☐ Center Pivot - mid-elevation spray application (MESA)*
- ☐ Center Pivot - variable rate irrigation (VRI)*
- ☐ Lateral Move - (LEPA, LESA, LPIC, MESA)
- ☐ Lateral Move - (VRI)
- ☐ Micro-irrigation - point source
- ☐ Micro-irrigation - sprays
- ☐ Micro-irrigation - continuous tape
- ☐ Micro-irrigation - subsurface drip
- ☐ Other (please explain)

**2. How do you measure the amount of water being delivered to your farm or ranch? Place an ☒ next to your selection .**

- ☐ No flow measuring devices
- ☐ Flow measurement - whole farm - manually recorded
- ☐ Flow measurement - whole farm - automatic recorded
- ☐ Flow measurement - whole farm plus individual field manual
- ☐ Flow measurement - whole farm plus individual field automatic recorded
- ☐ Other (please explain)

**3. How do you schedule irrigation? Place an ☒ next to your selection.**

☐Visual crop stress
☐Soil moisture by the NRCS feel method
☐Check book scheduling, irrigation scheduler, etc
☐Irrigation scheduling via pan evaporation or atmometer for field
☐Irrigation scheduling via regional weather network
☐Soil moisture using Gypsum Blocks, moisture probe, etc
☐Continuous measurement of soil moisture, water applied and ET (such as crop-flex or kan-sched)
☐Other (please explain)

**4. How is the water conveyed to your farm or ranch? Place an ☒ next to your selection.**

☐Very poor diversion facilities. Little control of flow rate to farm.
☐Can control flow rates to farm, but the on-farm delivery system is such that it is very hard to deliver the desired flow to any given field.
☐Flow rates to each field are adequately controlled. Flow rates to each set are difficult to control.
☐All flow rates to each set are adequately controlled (such as that provided by an on-site well).
☐Other (please explain)

**5. How is the water conveyed to fields? Place an ☒ next to your selection.**

☐Open ditch or canal - sand/gravel
☐Open ditch or canal - sandy loam
☐Open ditch or canal - clay soil
☐Open canal - lined
☐Closed conduit pipeline (includes on-site wells and sprinkler systems)
☐Other (please explain)

**6. What is the average condition of irrigated fields with regard to grade and slope? Place an ☒ next to your selection.**

☐Land smoothed
☐Land leveled
☐Land precision leveled
☐Land precision leveled - slope <= .005
☐A sprinkler system is utilized
☐Other (please explain)

**7. Do you capture tail-water and reuse it? Place an ☒ next to your selection.**

☐none
Tailwater reuse system installed
- ☐ Potential system efficiency <60%
- ☐ Potential system efficiency 61-80%
- ☐ Potential system efficiency > 80%

## 8. Do you apply pesticides and/or nutrients through your irrigation system?

☐Yes
☐No

### *Definition of terms related to Center Pivots:

**LEPA - Low Energy Precision Application**
a) Farmed in Circular Rows (except Linear Move Systems)
b) Nozzle Height is no more than 18 inches above soil surface
c) Nozzle Spacing is alternate row, up to a maximum of 80 inches
d) Discharge is through a drag sock or hose on the ground, or through a bubble shield or pad
e) Only applicable to crops planted with furrows or beds
f) Maximum of 1% slope in most of field
g) Furrow Diked or other means of preventing irrigation water movement away from point of application

**LESA - Low Elevation Spray Application**
a) Farmed in any row direction
b) Nozzle Height is no more than 18 inches above soil surface
c) Nozzle Spacing is alternate row, up to a maximum of 80 inches
d) Discharge is through spray nozzles
e) Applicable on crops flat planted, drilled, or planted with furrows or beds
f) Maximum of 3% slope in most of field
g) Furrow Diked or other means of preventing irrigation water movement away from point of application

**LPIC - Low Pressure In Canopy**
a) Farmed in any row direction
b) Nozzle Height is 18 inches to 36 inches above soil surface
c) Nozzle Spacing up to 120 inches (10 feet)
d) Discharge is in the crop canopy
e) Maximum of 3% slope in most of field
f) Systems that utilize bubble nozzles or drag hoses for a portion of the crop year and spray nozzles for a portion of the crop year but do not meet all LEPA criteria should be considered LPIC systems

**MESA - Mid Elevation Spray Application**
a) Farmed in any row direction
b) Nozzle Height is more than 36 inches (3 feet) and less than 84 inches (7 feet) above soil surface
c) Nozzle Spacing up to 120 inches (10 feet)
d) Discharge is above the crop canopy
e) Maximum of 3% slope in most of field

**Variable-Rate Irrigation (VRI)**, also called site-specific irrigation or precision irrigation, is a relatively new concept in agriculture. Variable-rate irrigation is a tool of Precision Farming that involves the delivery of irrigation water in optimum amounts over an entire field. This system relies heavily on automation with computer control of the pivot movement and pivot angle. The controller cycles air valves to set application rates considering such factors as soil, plant, fertility, and topography.

## Certification Statement

The above information is correct to the best of my knowledge. I understand that if requested, I can provide a minimum of two years of documentation to support the information provided above.

Name: _____ Date: _____